State of California Business, Transportation and Housing Agency

Memorandum

To JOSEPH PRATT - MS #5
Office of Structure Foundations
Division of Structures and Foundations

Date: October 31, 2000

File: 11-SD-5-KP 49.33
11-0301U1

Los Penasquitos Creek (Widen)
Bridge No. 57-0511

From: DEPARTMENT OF TRANSPORTATION
ENGINEERING SERVICE CENTER
DIVISION OF MATERIALS ENGINEERING AND TESTING SERVICES - MS #5
OFFICE OF TESTING AND TECHNOLOGY SERVICES

Subject: Addendum to Corrosion Review for Los Penasquitos Creek (Widen)

This is an addendum to our October 17, 2000 memo to you regarding the Los Penasquitos Creek (Widen) project. Under the heading Corrosion Recommendations, please delete the first bulleted item and add the following bulleted recommendation in its place:

- The minimum concrete cover requirements for chloride environments are addressed in Table 8.22.1 of the BDS (May 2000 draft). Chloride concentrations for soil and surface water at the site are between 500 ppm and 5000 ppm. Consequently, a minimum concrete cover of 75 mm (3 inches) should be used for reinforcing steel in pile caps and/or any other exposed portion of the CIDH piles, walls, and footings. For CIDH piles inside a steel shell and the columns at Bents 2 and 3, the minimum standard concrete cover of 50 mm (2 inches) is required. Additionally, the reinforcing steel bars in the columns in Bents 2 and 3 shall be pre-fabricated epoxy coated in accordance with SSP 52-650(PURP). The epoxy coating shall extend from 1 meter below the bottom of the Los Penasquitos Channel to 6 meters above the water surface level of the channel at maximum flow. The steel casings of the CIDH piles will protect the concrete, and steel reinforcement on the inside of the pile from diffusion of chlorides. Also, the permanent steel casing will be seated, or rock socketed, into the bedrock to seal the casing from intrusion of groundwater, and caving of soil. Therefore, the CIDH piles will be protected against chlorides with a permanent full-length steel casing on the sides and the rock socket will protect the CIDH piles at the pile tip.

If you have any questions regarding our comments, please contact Michael Tolin at (916) 227-5297 or Doug Parks at (916) 227-7007.

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Reviewed By:

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